

[illegible]

Page 1

**Accept**

[illegible]**Setup Start**[illegible]

**Stop**

**Cust Item ID:**

**Start Date:** 7/14/2011      **Start Qty:** 20.00

1. The first step is to identify the problem or question that needs to be addressed. This involves understanding the context and the specific requirements of the task.

2. The second step is to gather relevant information and resources. This may involve researching existing solutions, consulting with experts, or collecting data.

3. The third step is to analyze the information and identify the key factors that influence the outcome. This involves breaking down the problem into smaller, more manageable parts.

4. The fourth step is to develop a plan or strategy to address the problem. This involves determining the most effective approach and identifying the resources needed to implement it.

5. The fifth step is to implement the plan and monitor progress. This involves putting the plan into action and regularly checking the results to ensure that the problem is being solved.

6. The sixth step is to evaluate the results and make adjustments as needed. This involves comparing the actual results with the expected outcomes and identifying any areas for improvement.

7. The seventh step is to document the process and results. This involves creating a record of the steps taken and the outcomes achieved, which can be used for future reference.

8. The eighth step is to communicate the results to the relevant stakeholders. This involves sharing the findings and conclusions with those who are interested in the problem and its solution.

9. The ninth step is to reflect on the process and learn from the experience. This involves thinking about what worked well and what could be done better next time.

10. The tenth step is to apply the lessons learned to future problems. This involves using the knowledge gained from this experience to inform the approach to similar problems in the future.

**Required Date:** 7/28/2011      **Req'd Qty:** 20.00

1. The first step is to identify the problem. This involves understanding the current situation and what needs to be changed.

2. The second step is to set goals. These should be specific, measurable, achievable, relevant, and time-bound.

3. The third step is to develop a plan. This involves determining the steps that need to be taken to achieve the goals.

4. The fourth step is to implement the plan. This involves putting the plan into action and monitoring progress.

5. The fifth step is to evaluate the results. This involves assessing whether the goals have been achieved and what lessons can be learned.

**Customer:**

**Reference:**

Run Start

1. The first step in the process is to identify the problem or issue that needs to be addressed. This involves gathering information and understanding the context of the problem.

**Approvals:**

### Process Plan:

Date: 11-01-17

### Tooling:

Date:

**Stop**

**Abstract**

**QC:**

Date:

**SPC (Y/N):**

Date:

[illegible]

**Dart Aerospace Ltd**

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

\_\_\_\_\_

Page 2

**Accept**

[illegible]

**Setup Start**

**Stop**

[illegible]**Cust Item ID:**

**Abstract**

**Customer:**

**Reference:**

Run Start

**Stop**

**Insp.  
Stamp**

Identify as per dwg & Stock Location: MAT 41

0.00

2011/08/02

\_\_\_\_\_

### Packaging

## Memo

0.00

## Packaging

QC21- Final Inspection - Work Order Release

0.00

[illegible]

QC

## Memo

0.00

## Quality Control

22

ck 11/08/02

11-08-2

# Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

Wednesday, July 13, 2011 11:09:16 AM

Page 1

Work Order ID: 71884



Parent Item: D6103-003



Parent Item Name: Round Billet, Aluminum



Start Date: 7/14/2011

Required Date: 7/28/2011

Start Qty: 20.00

Required Qty: 20.00

Comments: IPP Rev:A New Issue 06-02-09 JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D6103-003P  round alum billet		Purchased	No			110	Each	0.0000	1 	20		<i>P 7/17/28</i>	<i>(22)</i>

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

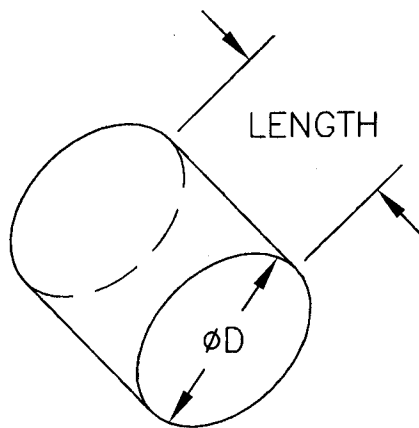
**NOTE:** Date & initial all entries



DESIGN PH	DRAWN BY PH	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED [Signature]	APPROVED [Signature]	DRAWING NO. D6103	Rev. B SHEET 1 OF 1
DATE 06.01.31		TITLE ROUND BILLET, ALUMINUM	SCALE NTS
A	01.04.10	NEW ISSUE	
B	06.01.31	ADD D6103-003	

## SPECIFICATION CONTROL DRAWING

RELEASED  
06.02.07



PURCHASE MATERIAL ACCORDING TO THE FOLLOWING TABLE. SPECIFY ALLOY, DIAMETER x LENGTH (+0.030/-0.000) AS SHOWN.

TOLERANCE ON ALL DIMENSIONS IS +0.030/-0.000.

ALL DIMENSIONS ARE IN INCHES.

71883

Part No.	Alloy	D (Diameter)	Length
D6103-001	7075-T6/T651 (QQ-A-200/11 OR QQ-A-225/9)	Ø3.250	12.50
D6103-003	7075-T7351 (QQ-A-225/9)	Ø3.500	12.50

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries





Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

## PURCHASE ORDER

Purchase Order ID PO14483

Purchase Order Date 7/14/2011

PO Print Date 7/14/2011

Page Number 1 of 1

Order From :

VC-MET001

METAUX CASTLE

A.M. CASTLE & CO. (CANADA) INC. - BOX B9204 PO BOX 9100  
TORONTO, ON M4Y 3A5  
CA

Contact Name

Vendor Phone

Vendor Fax

Vendor Account Nbr

514 694 9575

514 695 3281

Buyer

Requisition Nbr

Tax Resale Nbr

Terms

Currency

FOB

Chantal Lavoie

10127-2607

Net 30

CAD

Destination-Collect

Ship To :

DART AEROSPACE LTD

1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA

FAKED  
CL 7/14

Line Nbr	Reference Revision ID Vendor Part Number	Description/ Mfg ID	Req Date/ Taxable	Req Qty/ Unit of Measure	Ship Method	Unit Price	Extended Price
1	D6103-003P	round alum billet	7/28/2011 Yes	20.00 Each	Yours ppd	\$65.0000	\$1,300.00

Special Inst: AS PER DWG D6103 REV. B  
B71884  
MATERIAL: 7075-T7351 AS PER QQ-A-  
225/9  
SIZE: 3.500" X 12.500" LONG  
TOLERANCE ON ALL DIMENSION ARE  
+0.030"/-0.000

PO Total:

\$1,300.00

MATERIAL CERTIFICATION  
REQD UPON DELIVERY

Change Nbr: 1

Change Date: 7/14/2011

No substitution or deviation without  
consent.  
Certificate of Conformity or Material  
Certification required when applicable

**Castle Metals®**

A. M. Castle &amp; Co.

**PACKING SLIP**

Page 1 of 1

Shipment No:910470

<b>Ship From:</b> A. M. Castle & Co. (Canada) Inc. TORONTO 2150 ARGENTIA ROAD MISSISSAUGA, ON L5N 2K7		<b>Sold To:</b> DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA		<b>Ship To:</b> DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CAN		<b>Deliver To:</b> DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA	
<b>Date Shipped</b> 27-JUL-2011	<b>F.O.B.</b> ORIGIN	<b>Freight Terms</b> Prepaid		<b>Carrier</b> MANITOULIN		<b>BOL No</b> 910470-2	

<b>Shipment Details</b>	<b>Final Destination Branch - TOR</b>
-------------------------	---------------------------------------

<b>Order No</b> 1589781	<b>Line No</b> 1	<b>Item No</b> 8808.MO	<b>Description</b> 3.5000..RD.7075.T7351.ALUMINUM.CF.144.0000 CUT TO 12.5 IN ( + .0620/- .0000 IN) - BAND SAW CUTTING SPECIFICATIONS: QQ-A-225/9				
<b>Purchase Order No</b> 14483		<b>Part Number</b> YOUR ITEM NUMBER: D6103-003		<b>Ordered Qty</b> 22 PCS		<b>Invoice Qty</b> 22 PCS	
<b>Details</b>							
<b>Delivery No.</b> 87257336	<b>Mill</b>	<b>Heat Number</b> MA011003332	<b>Mech Id</b>	<b>PCS</b> 22	<b>Width (IN)</b>	<b>Length (IN)</b>	<b>Shipped Qty(LBS)</b> 266.76

These commodities/technologies are subject to US Export Administration & US State Dept. Regulations and, if intended for export, were/are exported thereunder. Diversion contrary to US Law is Prohibited.			
We hereby certify the material covered by this certification conforms in accordance with the above specifications and has been found to meet the applicable requirements for the material, including any specifications forming a part of the description. Test reports are on file subject to examination. All claims for defective material are waived unless made in writing to A.M. Castle & Co. within 60 days of the shipment. Material cut to the correct size, or material cut by the customer cannot be returned for credit.			
Reviewed by Authorized Castle Metals Representative:		Date:	

# Certified Inspection Report

05/25/11  
09:30:29

Alcoa Inc.  
Massena Operations  
Park Avenue East, Massena, NY 13662



Customer <b>Castle A M &amp; Co</b>	Customer P.O. No. <b>109532</b>	Customer Part No. <b>(8808)</b>	Alcoa Order No. <b>MMC-97150- -002</b>	Govt. Contract No.
Ship To <b>A. M. Castle &amp; Company</b> <b>3400 North Wolf Road</b> <b>Bay #7</b> <b>Franklin Park, IL 60131</b>		We hereby certify that the material covered in this report has been inspected in accordance with, and has been found to meet the applicable requirements described herein, including any specifications forming a part of the description and that samples representative of the material met the composition limits and have the mechanical properties shown on the face of this sheet. Manufactured under an ISO/OS-9000 registered quality management system. Melted and manufactured in the USA. Thomas J. Klemp, Quality Assurance Manager		
Date Shipped <b>05/25/11</b>	Weight Shipped <b>10,104 lbs</b>	Product <b>CFRB-CF ROD Specific Length</b>	BOL <b>000159457</b>	
Alloy - Temper <b>7075-T7351</b>	Size <b>3.50000 IN</b>	Shape <b>DIA</b>	Config <b>12 FT</b>	QRR

## Specifications:

A97075-11 Rev 10 w/exc & comments per T  
Klemp email dtd 1/5/10  
Material conforms to T73 requirements  
Minimum mechanical properties to apply:  
68 KSI Tensile Strength  
56 KSI Yield Strength  
10% Elongation  
AMS 4124D (Except Size)  
QQA-225/9E (Except Size)  
ASTM B211-03 (Except Size)  
AMS-QQA-225/9 (Except Size)

Product produced and marked to the requirements of AMS-QQ-A-225/9 also meets the requirements of QQ-A-225/9.  
Product produced and marked to the requirements of QQ-A-225/9 also meets the requirements of AMS-QQ-A-225/9.

TEST REQUIREMENTS		Test	Test	Test	Test	Test	Test	Test	Test	Test
		U.T.S.	T.Y.S.	%Elong	Cond					
Max:			67.9							
Min:		68.0	56.0	10.0	38.0					

Test Results		Test	Test	Test	Test	Test	Test	Test	Test	Test
Lot / Work Order	No. of Tests	U.T.S.	T.Y.S.	%Elong	Cond					
MA011003332	1	Max: 72.3	61.2	15.0	41.1					
		Min: 72.3	61.2	15.0	41.1					
MA011003333	1	Max: 71.0	59.4	15.0	41.4					
		Min: 71.0	59.4	15.0	41.4					
MA011004085	1	Max: 72.3	61.0	15.0	40.9					
		Min: 72.3	61.0	15.0	40.9					

## TEST ABBREVIATIONS

U.T.S. Ultimate Tensile Strength KSI  
Cond Conductivity % IACS

T.Y.S. Tensile Yield Strength KSI

%Elong Elongation % in 2"

## Aluminum Association Chemical Composition Limits (in Weight %)

ALLOY		%SI	%FE	%CU	%MN	%MG	%CR	%ZN	%TI	%Others	%Others	%AL			
7075	MAX	0.40	0.50	2.0	0.30	2.9	0.28	6.1	0.20	0.05	0.15	Rem			
	MIN			1.2		2.1	0.18	5.1		Each	Total				

# Certified Inspection Report

05/25/11  
09:30:29

Alcoa Inc.  
Massena Operations  
Park Avenue East, Massena, NY 13662



Customer  
**Castle A M & Co**

Customer P.O. No.  
**109532**

Customer Part No.  
**(8808)**

Alcoa Order No.  
**MMC-97150-002**

Govt. Contract No.

Actual Started Chemistry

LOT/WORK ORDER		%SI	%FE	%CU	%MN	%MG	%CR	%ZN	%TI	%OE	%OT	%AL			
<b>MAO 11003332</b>	MAX	0.08	0.15	1.6	0.02	2.5	0.20	5.7	0.02	LT 0.05	LT 0.15	Rem			
	MIN	0.06	0.12	1.4	0.01	2.3	0.20	5.5	0.02						
<b>MAO 11003333</b>	MAX	0.08	0.12	1.6	0.02	2.5	0.20	5.7	0.02	LT 0.05	LT 0.15	Rem			
	MIN	0.07	0.12	1.4	0.02	2.3	0.20	5.5	0.02						
<b>MAO 11004085</b>	MAX	0.08	0.15	1.6	0.02	2.5	0.20	5.7	0.02	LT 0.05	LT 0.15	Rem			
	MIN	0.06	0.12	1.4	0.01	2.3	0.20	5.5	0.02						

## NOTES:

Mercury is not a normal contaminant in aluminum alloys and neither it nor any of its compounds are used in the manufacture of our product.

This alloy meets the requirements of EU 2002/95/EC (RoHS) and EU 2000/53/EC for lead, mercury, cadmium and hexavalent chromium.

## Castle Metals FP

HEAT NUMBER MAO11003332  
MECHANICAL ID \_\_\_\_\_  
ITEM CODE 8808  
LOT NUMBER \_\_\_\_\_  
PO NUMBER 109532  
RECEIPT DATE 5-31-2011  
SUPPLIER ALCOA  
SPECIFICATION \_\_\_\_\_  
LCS NO  
COMMENT \_\_\_\_\_  
APPROVED [Signature]